Application No. 09/941,151
Amendment and Response dated March 14, 2005
Reply to Non-Final Office Action of November 12, 2005

Listing of Claims
This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-49 (canceled)

50.(currently amended) The method of claim [[49]] <u>111</u> wherein:

the ~~person~~ viewing <u>on</u> the <u>computer</u> display is <u>by</u> an orthodontic practitioner; and

the feedback information <u>is from the orthodontic practitioner and</u> includes

information selected from the group consisting essentially of information of changes to the

suggested tooth positions and orientations, and information approving tooth positions and

orientations toward which the teeth of the patient are to be moved by the appliance.

51.(currently amended) The method of claim 50 further comprising:

providing the ~~person viewing the display~~ <u>orthodontic practitioner</u> with a computer

interface and displaying the images thereon <u>to the orthodontic practitioner; and</u>

providing the computer interface with a capability for the entry by the person viewing the

display of the feedback information.

52.(currently amended) The method of claim [[49]] <u>111</u> wherein:

the feedback information includes information of changes to the suggested tooth positions

and orientations;

the method further comprises redisplaying images of the teeth in tooth positions and

orientations revised in accordance with the feedback information ~~for inspection by~~

~~the person viewing the display~~.

53.(currently amended) The method of claim [[49]] <u>111</u> wherein:

the three-dimensional information is derived at least in part from an impression of the

teeth of the patient from the orthodontic practitioner; and

the displaying of the images of the teeth of the patient is in response to data digitized from

a model of the teeth made from the impression.

Application No. 09/941,151
Amendment and Response dated March 14, 2005
Reply to Non-Final Office Action of November 12, 2005

54.(currently amended) The method of claim [[49]] <u>111</u> further comprising:

communicating the three-dimensional information to a remote computing facility for the

derivation of the suggested tooth positions and orientations from the three-

dimensional information; and

displaying digital images of the teeth of the patient in the suggested tooth positions and

orientations on the computer display.

55.(currently amended) The method of claim [[49]] <u>111</u> further comprising:

communicating the three-dimensional information to a remote computing facility for the

derivation of the suggested tooth positions and orientations from the three-

dimensional information; and

displaying digital images of the teeth of the patient in the suggested tooth positions and

orientations on the computer display;

communicating, to an orthodontic appliance manufacturing facility having equipment

thereat for manufacturing the custom orthodontic appliance, data that includes

three-dimensional information of the shapes of the teeth of the patient and

information regarding tooth positions and orientations toward which the teeth of

the patient are to be moved by orthodontic treatment; and

receiving from the orthodontic appliance manufacturing facility the custom orthodontic

appliance for providing the appliance to the orthodontic practitioner for the

treatment of the patient.

56.(currently amended) The method of claim [[49]] <u>111</u> further comprising:

communicating, to a remote orthodontic appliance manufacturing facility having

equipment thereat for manufacturing the custom orthodontic appliance, data that

includes three-dimensional information of the shapes of the teeth of the patient

and information regarding tooth positions and orientations toward which the teeth

of the patient are to be moved by orthodontic treatment; and

receiving from the remote orthodontic appliance manufacturing facility the custom

       orthodontic appliance for providing the appliance to the orthodontic practitioner

       for the treatment of the patient.

57.(currently amended) The method of claim [[49]] <u>111</u> wherein:

the feedback information includes information selected from the group consisting

       essentially of information of changes to the suggested tooth positions and

       ~~orientations and~~ <u>orientations, and</u> information approving tooth positions and

       orientations toward which the teeth of the patient are to be moved by the

       appliance;

the method further comprises:

       ~~providing the person~~ <u>providing a person</u> viewing the display with a capability for

              entering feedback information in the form of change data from an

              orthodontic practitioner into a computer indicating selected changes in the

              suggested tooth positions and orientations;

       displaying on the computer images of the teeth in revised tooth positions and

              orientations in response to the feedback information.

58.(previously presented) The method of claim 57 further comprising:

establishing a digital communications link between a computer terminal and a digital

       computer at a remote location;

transferring the three-dimensional information in digital form to the remote location;

deriving with the digital computer at the remote location the suggested tooth positions and

       orientations;

communicating digital data of the suggested tooth positions and orientations from the

       remote location to the computer display;

communicating change data from the computer display to the computer at the remote

       location;

calculating the revised tooth positions and orientations with the digital computer at the
remote location in response to the change data;

communicating digital data of the revised tooth positions and orientations from the
remote location to the computer display.

59.(previously amended) The method of claim **58** further comprising:

entering commands accepting tooth positions and orientations at the computer display;

communicating entered commands accepting tooth positions and orientations to the
remote location; and

processing data of the accepted revised tooth positions and orientations and of the three-
dimensional information and designing of the custom orthodontic appliance with
the digital computer at the remote location.

60.(previously presented) The method of claim **59** further comprising:

transmitting data of the designed custom orthodontic appliance from the remote location;

displaying images of the designed custom orthodontic appliance on the computer display
in response to the transmitted data;

transmitting appliance modification data to the computer at the remote location and
redesigning the appliance with the digital computer at the remote location in
response to the transmitted appliance modification data.

61.(currently amended) The method of claim [[49]] **111** wherein:

the custom orthodontic appliance includes positioning jigs having surfaces thereon that
conform to the shapes of the teeth of the patient.

62.(currently amended) The method of claim [[49]] **111** wherein:

the custom orthodontic appliance includes positioning jigs having surfaces thereon that
conform to the shapes of the teeth of the patient; and

the method further comprises:

Page 5 of 10

locating the jigs on the patient with said surfaces conforming to the shape of the

teeth,

positioning the appliance on the teeth with the jigs, and

bonding the appliance so positioned to the tooth.

Claims 63-83 (canceled)

84.(previously presented) The method of claim 52 wherein:

the feedback information includes information from an orthodontic practitioner approving

the revised tooth positions and orientations as those toward which the teeth of the

patient are to be moved by the appliance.

Claims 85-110 (canceled)

111.(new) A method of providing a custom orthodontic appliance for repositioning teeth
of a patient comprising:

communicating three-dimensional information of the shapes of the teeth of the patient;

displaying images of the teeth of the patient on a computer display in suggested tooth

positions and orientations that are based on the three-dimensional information;

viewing the displayed images;

communicating feedback information in response to the viewing of the displayed images;

and

providing a custom orthodontic appliance to reposition teeth of the patient based on the

suggested tooth positions and orientations in accordance with the feedback

information.

112.(new) The method of claim 111 wherein:

the feedback information includes information approving tooth positions and orientations

toward which the teeth of the patient are to be moved by the appliance.

Application No. 09/941,151
Amendment and Response dated March 14, 2005
Reply to Non-Final Office Action of November 12, 2005

113.(new) The method of claim 112 further comprising:

providing a computer interface having a capability for the entry of the feedback

information.

114.(new) The method of claim 111 wherein:

the feedback information includes information approving a treatment plan to reposition

teeth of the patient with the appliance.

115.(new) The method of claim 114 further comprising:

providing a computer interface having a capability for the entry of the feedback

information.

116.(new) The method of claim 111 wherein:

the feedback information includes information of a change in position or orientation of at

least one tooth from the suggested tooth positions and orientations.

117.(new) The method of claim 116 further comprising:

providing a computer interface having a capability for the entry of the feedback

information.

118.(new) The method of claim 116 further comprising:

redisplaying images of the teeth in tooth positions and orientations in accordance with the

feedback information.

Page 7 of 10

Application No. 09/941,151
Amendment and Response dated March 14, 2005
Reply to Non-Final Office Action of November 12, 2005

119.(new) The method of claim 111 wherein:

the communicating of the three-dimensional information includes communicating, from

an orthodontic practitioner, three-dimensional information from the mouth of a

patient of the shapes of the teeth of the patient;

the displaying includes displaying the images for inspection by a person viewing the

display;

the communicating of the feedback information includes communicating, from the person

viewing the display, the feedback information regarding the suggested tooth

positions and orientations toward which the teeth of the patient are to be moved by

orthodontic treatment of the patient; and

the custom orthodontic appliance is configured to urge the teeth of the patient, when

installed thereon, toward tooth positions and orientations and that has been

manufactured based on the suggested tooth positions and orientations in

accordance with the feedback information.